

# Alba 675

1975

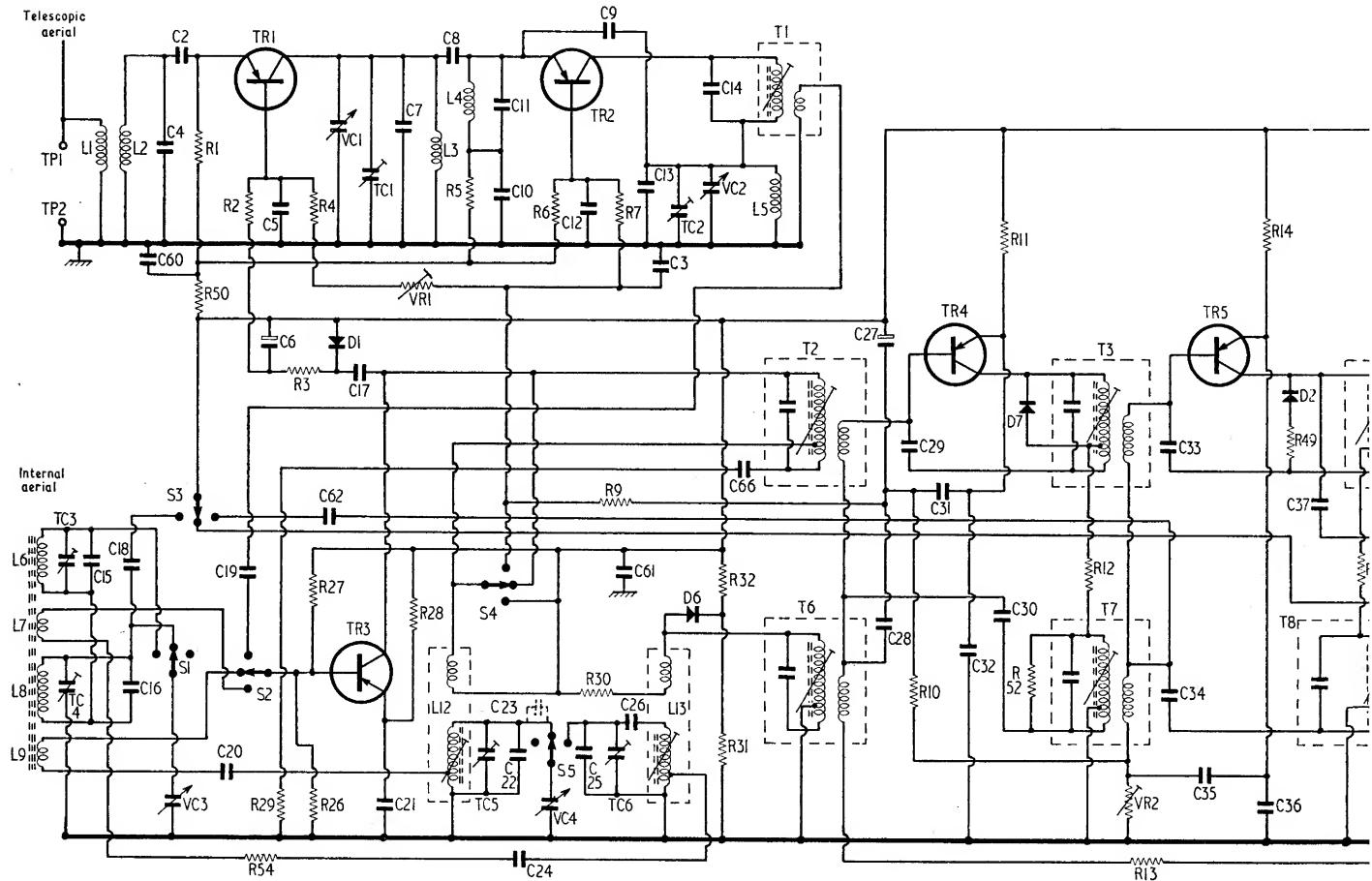
A.m./f.m. battery operated portable radio receiver

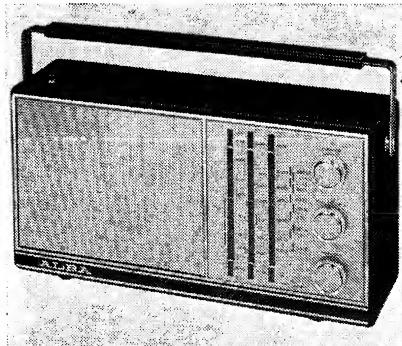
## Component values and locations

Component numbers in table and circuit diagram, correspond with those used in the manufacturer's service manual.

	Resistors		R9	8.2kΩ	A1	R18	1.5kΩ	A2	R27	3.9kΩ	A1	R
R1	220Ω		R10	10kΩ	A2	R19	1kΩ	A2	R28	3.3kΩ	A1	R
R2	2.2kΩ		R11	680Ω	A1	R20	1kΩ	A2	R29	15kΩ	A1	R
R3	5.6kΩ		R12	150Ω	A1	R21	10kΩ	A2	R30	100Ω	B1	R
R4	33kΩ		R13	5.6kΩ	A2	R22	1kΩ	A2	R31	2.2kΩ	A1	R
R5	1.2kΩ		R14	1kΩ	A2	R23	100kΩ	A2	R32	15kΩ	A1	R
R6	2.2kΩ		R15	220Ω	A2	R24	100kΩ	A2	R33	47kΩ	B2	R
R7	5.1kΩ		R16	270Ω	A2	R25	5.6kΩ	A2	R34	10kΩ	B2	R
	B1		R17	560Ω	A2	R26	15kΩ	A1	R35	1kΩ	B2	R

C	60	4	2	6	5	VCI	I7	TCI	7	8	I0	I1	I2	9	I3	3	TC2	I4	VC2	27		33								
	TC3	TC4	I5	I8	I6	VC3	20	I9	62	21	TC5	22	24	VC4	25	TC6	61	I26	66		28	29	31	32	30	34	35	36	37	
R	1	50	2	3	4		VRI	5	6	7										II						14				
	54	29	26	27				28	30	9					32	31				10	52	I2	VR2	I3			49	I		
L	1	2							3	4									5	T1	T2				T3					
	6,7,8,9								12										T6						T7					

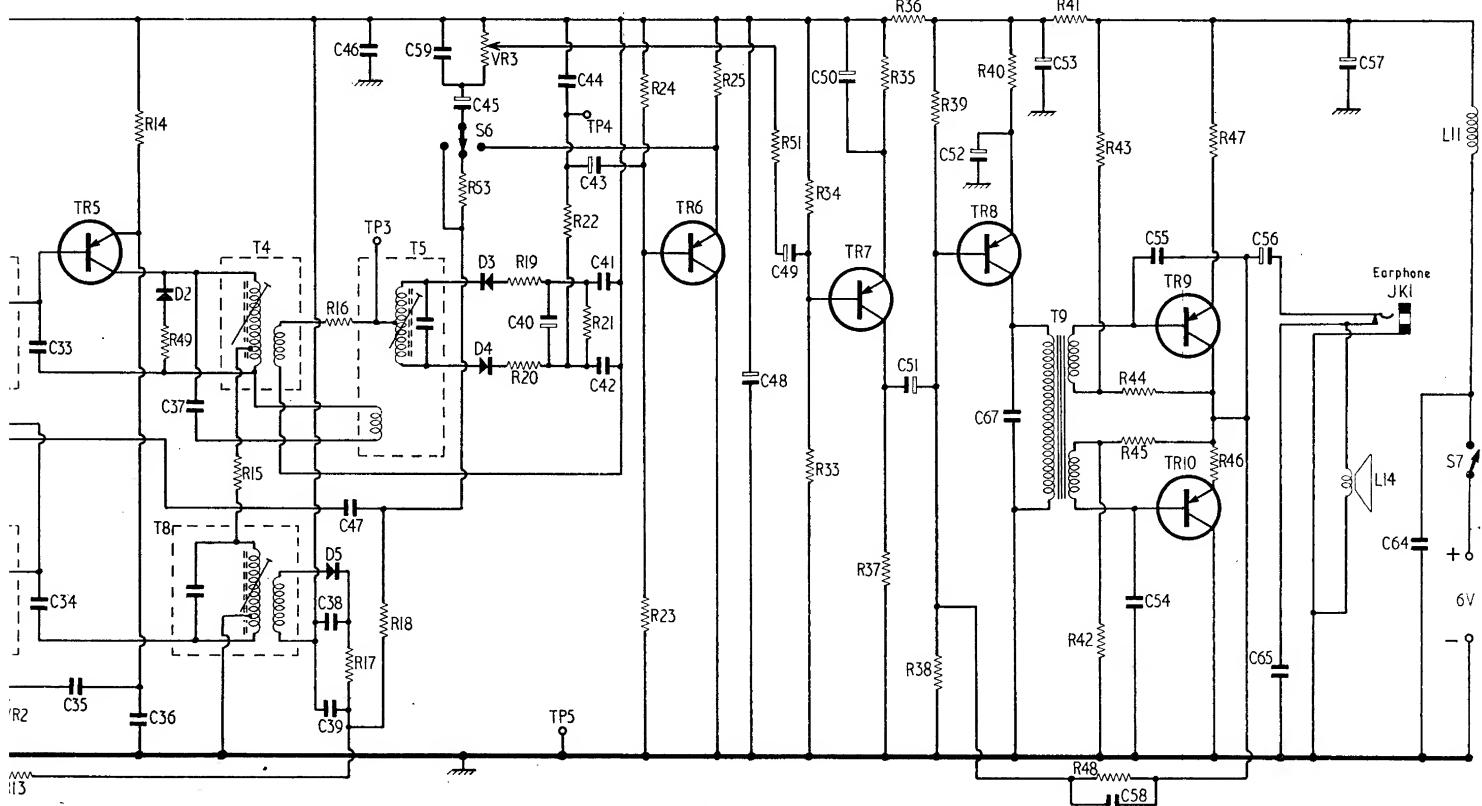




R54	47Ω	B1	C24	3000pF	B1	C54	0.01μF	A2	L5	— A1
VR1	100kΩ	B1	C25	10pF	B1	C55	0.01μF	A2	L6	— B1
VR2	100kΩ	A2	C26	270pF	B1	C56	220μF	A2	L7	— B1
VR3	5kΩ	B2	C27	10μF	A1	C57	220μF	A2	L8	— A1
			C28	1000pF	A1	C58	200pF	B2	L9	— A1
<b>Capacitors</b>										
C2	0.01μF	B1	C29	10pF	A1	C59	200pF	B2	L11	— B2
C3	0.02μF	A1	C30	4pF	A1	C60	0.02μF	B1	L12	— B1
			C31	0.02μF	A1	C61	0.04μF	—	L13	— B1
C4	80pF	B1	C32	0.04μF	A1	C62	0.04μF	A2	L14	8Ω —
C5	1000pF	B1	C33	12pF	A2	C64	0.04μF	B2	T1	— A1
C6	4.7μF	B1	C34	4pF	A2	C65	0.02μF	A2	T2	— A1
C7	16pF	B2	C35	0.02μF	A2	C66	10pF	A1	T3	— A1
C8	3pF	B1	C36	0.02μF	A2	C67	500pF	—	T4	— A2
C9	5pF	B1	C37	25pF	A2	TC1	—	B2	T5	— A2
C10	500pF	B1	C38	0.01μF	A2	TC2	—	B1	T6	— A1
C11	20pF	B1	C39	0.01μF	A2	TC3	—	A1	T7	— A2
C12	1000pF	B1	C40	4.7μF	A2	TC4	—	A1	T8	— A2
C13	18pF	B1	C41	1000pF	A2	TC5	—	B1	T9	— B2
C14	40pF	A1	C42	1000pF	A2	TC6	—	B1		
C15	5pF	A1	C43	4.7μF	A2	VC1	—	B1		
C16	20pF	A1	C44	5000pF	A2	VC2	—	B1	D1	1S188 A1
C17	17pF	A1	C45	4.7μF	B2	VC3	—	A1	D2	1S188 A2
C18	0.01μF	A2	C46	0.02μF	A2	VC4	—	A1	D3	1S188 A2
C19	5000pF	A1	C47	0.02μF	A2				D4	1S188 A2
C20	0.01μF	B1	C48	220μF	A2				D5	1S188 A2
C21	0.01μF	A1	C49	4.7μF	B2				D6	1S188 A1
C22	90pF	B1	C50	33μF	B2	L1	—	B1	D7	1S188 A1
C23†	1kΩ	A2	C51	0.5μF	B2	L2	—	B1		
R27	3.9kΩ	A1	C52	33μF	B2	L3	—	B1		
R28	3.3kΩ	A1	C53	220μF	B2	L4	—	B1		
R29	15kΩ	A1								
R30	100Ω	B1								
R31	2.2kΩ	A1								
R32	15kΩ	A1								
R33	47kΩ	B2								
R34	10kΩ	B2								
R35	1kΩ	B2								
<b>Miscellaneous</b>										
									D1	1S188 A1
									D2	1S188 A2
									D3	1S188 A2
									D4	1S188 A2
									D5	1S188 A2
									D6	1S188 A1
									D7	1S188 A1

\* Alternative position  
† May not be fitted

33		46	59	45	40	44	43	41		
34	35	36	37	38	39	47				
I4				16	53	VR3	19	22	21	24
R2	I3						25	51	34	35
		49	I5		17	18	20	33	37	38
							33	37	38	
T4			T5					40	41	43
								42	43	45
								46		
									T9	
										I4



# 1975

## Alba 675

### Introduction

Incorporating ten transistors and seven diodes, model 675 is a three-band battery operated a.m./f.m. portable radio receiver.

Wavebands covered are l.w. 150-350kHz. (2000-857m), m.w. 540-1605kHz (566-187m) and v.h.f./f.m. 87.5-104MHz. Reception for medium and long wave bands is via an internal ferrite rod aerial assembly, for v.h.f. a telescopic aerial is fitted.

A maximum audio output of 500mW is handled with a 4in diameter 8Ω impedance loudspeaker. A normally closed jack is fitted for the connection of an 8Ω earphone which, when in operation, provides a mute to the loudspeaker.

Operation is from a 6V power supply which is provided by four 1.5V cells, Ever Ready type LPU2 or equivalent.

### Circuit alignment

Access to all cores, trimmers and test points is obtained when the back of the receiver case is opened.

### A.M. alignment

**Equipment required.** – An a.m. signal generator, r.f. coupling coil and 8Ω impedance output meter.

Check cursor travel and, if necessary, adjust position on cord so that extreme ends of travel are equal at each end of scale, approximately  $\frac{1}{8}$ in.

Replace loudspeaker with output meter. For convenience, terminate output meter in a miniature jack plug and insert in earphone jack.

Terminate signal generator in the r.f. coupling coil and loosely couple coil to ferrite rod aerial assembly.

Rotate volume control to maximum and maintain an audio output power of 50mW, attenuating input signal as necessary so that the receiver a.g.c. does not mask alignment peaks.

- Switch receiver to m.w., rotate tuning gang to maximum capacitance and feed in a 470kHz a.m. signal. Adjust **T6**, **T7** and **T8** for maximum output. Repeat for optimum results.

- Switch receiver to l.w., rotate tuning gang to maximum capacitance and feed in a 145kHz a.m. signal. Adjust **L12** for maximum output.

- Rotate tuning gang to minimum capacitance and feed in a 365kHz a.m. signal. Adjust **TC6** for maximum output.

- Feed in a 160kHz a.m. signal and tune receiver to this signal. Adjust position of **L8** on ferrite rod for maximum output.

- Feed in a 340kHz a.m. signal and tune receiver to this signal. Adjust **TC3** for maximum output.

- Repeat operations 2 to 5 for optimum results.

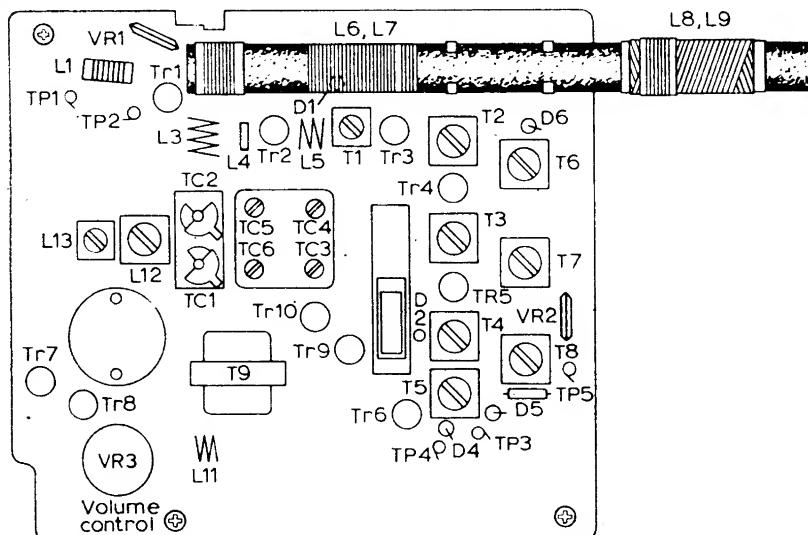
- Switch receiver to m.w., rotate tuning gang to maximum capacitance and feed in a 505kHz a.m. signal. Adjust **L13** for maximum output.

- Rotate tuning gang to minimum capacitance and feed in a 1,650kHz a.m. signal. Adjust **TC5** for maximum output.

- Feed in a 570kHz a.m. signal and tune receiver to this signal. Adjust position of **L6** on ferrite rod for maximum output.

- Feed in a 1,400kHz a.m. signal and tune receiver to this signal. Adjust **TC4** for maximum output.

- Repeat operations 7 to 10 for optimum results. Disconnect test equipment.



## F.M. alignment

**Equipment required.** — A wobbulator, a c.r.o. (oscilloscope), a dummy aerial and  $8\Omega$  output meter.

Terminate wobbulator in the dummy aerial and connect between test points TP1 and TP2. Connect c.r.o. between TP3 and TP5.

Feed in a 10.7MHz signal deviated 300kHz at 50Hz. Adjust **T1**, **T2**, **T3** and **T4** for maximum trace amplitude and symmetry about 10.7MHz.

Transfer c.r.o. to test points TP4 and TP5 and adjust **T5** for optimum symmetry of 'S' curve. Disconnect c.r.o.

Connect output meter in place of loudspeaker (as for a.m. alignment) and rotate volume control to maximum.

Tune receiver to 90MHz and feed in a 90MHz signal deviated 25kHz at 1kHz. Adjust turns spacing of **L5** for maximum output.

Tune receiver to 104MHz and feed in a 104MHz signal deviated 25kHz at 1kHz. Adjust **TC2** for maximum output.

Retune receiver to 90MHz, feed in a 90MHz f.m. signal and adjust turns spacing of **L3** for maximum output.

Tune receiver to 104MHz, feed in a 104MHz f.m. signal and adjust **TC1** for maximum output.

Repeat all r.f. adjustments for optimum results and disconnect test equipment.

## **General notes**

**Dismantling.** — To gain access to foil side of printed panel and drive cord assembly. First remove batteries then pull off the three front control knobs. Unscrew and remove the three Phillips-head screws and washers securing the panel. In order to reverse panel it may be necessary to unsolder the battery positive lead at the switch.

*Preset adjustments.* — With no signal input **VR1** should be adjusted so that **TR1** collector current is 600 $\mu$ A. Adjust **VR2** so that **TR4** collector current is 450 $\mu$ A.

